



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,100	12/03/2001	Robert A. Shepherd JR.	NOVEP015	9461
25920	7590	10/18/2004	EXAMINER	
MARTINE & PENILLA, LLP 710 LAKEWAY DRIVE SUITE 170 SUNNYVALE, CA 94085				ZERVIGON, RUDY
		ART UNIT		PAPER NUMBER
		1763		

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

MAILED
OCT 18 2004
GROUP 1



UNITED STATES PATENT AND TRADEMARK OFFICE

SC
COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

MAIL

OCT 18 2004

GROUP 1700

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/006,100

Filing Date: December 03, 2001

Appellant(s): SHEPHERD ET AL.

Feb R. Cabrasawan
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 21, 2004.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

No amendment after final has been filed.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-17 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

The rejection of claims 18-23 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *ClaimsAppealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

US 5480678 A	Rudolph, James W. et al.	1-1996
US 5217559 A	Moslehi, Mehrdad M. et al.	6-1993
US 4311671 A	Notman, Alan	1-1982

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-17 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on February 17, 2004.

Claims 18-23 are rejected under 35 U.S.C. 103(a). This rejection is set forth in a prior Office Action, mailed on February 17, 2004.

(11) *Response to Argument*

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant states:

“

The Examiner emphasized in the Office Action mailed on February 17, 2004, that “the fluids (are) capable of mixing together at each level of the multilevel structure (Figure 4; column 10, lines 17-41).” However, Applicants carefully reviewed the citation in column 10 to learn that a “control gas 160...operates as a switch” to either permit process plasma 120 to reach the wafer or prevent plasma 120 from reaching the wafer. Specifically, Moslehi et al. discloses that the control gas flow blocks the flow of plasma upward to the wafer. This permits Moslehi et al.’s reactor 10 to operate in two discrete modes of plasma processing and photochemical processing mode.

“

In response to applicant's above argument, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In particular, it is clear from Moslehi's cited discussion and Figure 3 that the plasma supplied through Moslehi's input port (24; Figure 1; 122; Figure 3) capable of mixing with the supplied fluid within the second chamber (154; column 10, lines 17-41) is inherent due to the variable flow rates permitted by Moslehi (“gas flow controller (not shown)”; column 6, lines 5-9). Such variable flow rates of plasma gas injection would permit Applicant's intended use of fluids capable of mixing together at each level of the multilevel structure based on pressure

differences between Moslehi's injection gas port 156, Figure 3 and Moslehi's plasma entry port 122, Figure 3.

Applicant states:

“

Further Notman, synthesizes methanol and ammonia, which are chemicals that are destructive to wafers.

“

In response to applicant's above argument that Notman is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Notman is both in the field of applicant's endeavor and is reasonably pertinent to the particular problem with which the applicant was concerned – fluid delivery, distribution, and mixing.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, the Examiner believes proper motivation was found in the references themselves. For example, Notman's staggered hole distribution is clearly established to provide for a

nonlinear flow through a reactor. Further, it was cited, that motivation to alter the flow rates of Moslehi's injected gases to increase turbulent mixing is to optimize the mixing of the plasma and nonplasma gases. Further, it would be obvious to those of ordinary skill in the art to optimize the operation of the claimed invention (In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990), MPEP 2144.05).

Motivation for combining Moslehi et al (USPat. 5,217,559) in view of James W. Rudolph (USPat. 5,480,678) is to provide for gas dispersion as taught by Rudolph (column 9, lines 53-65).

Applicant states:

“

However, referring to Rudolph et al., the Examiner asserts that the hollow tube (122, Figure 4; column 12, lines 46-48) conduit (17, Figure 6) of the reference is applicable to Moslehi et al. However, “hollow tube 144” and “conduit 17” as characterized by the Examiner are taught by the reference to be upper and lower rings 122 and a plurality of perforated inlet legs 17, respectively. Thus, it is unclear that Rudolph et al. teaches a hollow tube conduit that is perforated.

“

In response, the Examiner has stated:

“

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace Moslehi's plasma delivery conduit (122; Figure 4) with Rudolph's perforated hollow

tube (122, Figure 4; column 12; lines 46-68) conduit (17, Figure 6) such that Moslehi's plasma delivery conduit extends to an output (180) of the housing (both sides; 165, Figure 4).

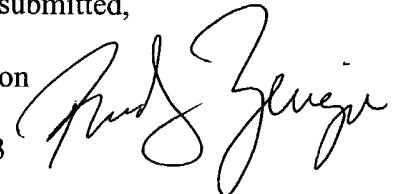
“

Indeed, reference to “ (122, Figure 4; column 12; lines 46-68) ” is to Moslehi's fluid entry port, while conduit (17, Figure 6) refers to Rudolph's perforated hollow tube conduit. It was the Examiner's intent to simply convey the replacement of Moslehi's fluid entry port (122; Figure 4) with Rudolph's perforated hollow tube conduit (17; Figure 6). The Examiner believes that Applicant clearly understood the rejection as it was presented in prior actions without protest.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Rudy Zervigon
Examiner
Art Unit 1763



Rudy Zervigon
October 14, 2004

Conferees
Gregory Mills (SPE 1763)
Glenn Calderola (SPE 1764)
Rudy Zervigon (Examiner 1763)

MARTINE & PENILLA, LLP
710 LAKEWAY DRIVE
SUITE 170
SUNNYVALE, CA 94085



Glenn Calderola
Supervisory Patent Examiner
Technology Center 1700



GREGORY MILLS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700